

MAC-T Monthly Call

Midwest Agriculture and Climate Team

April 15, 2020

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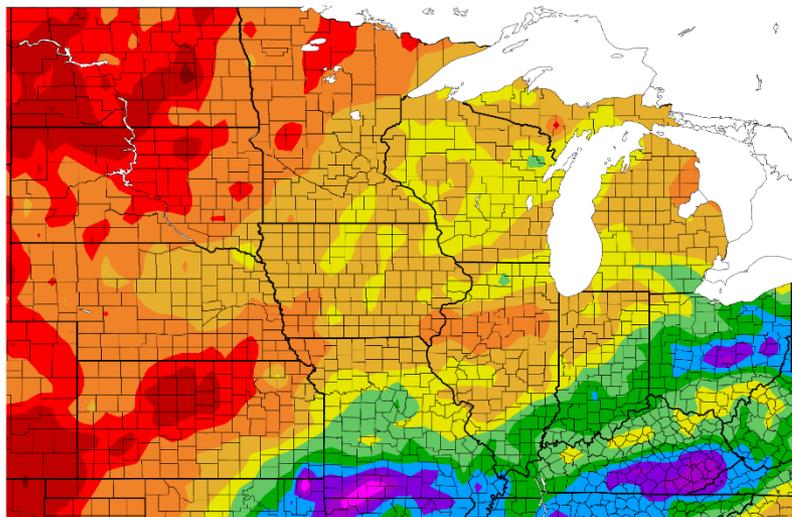


Midwest Climate Hub

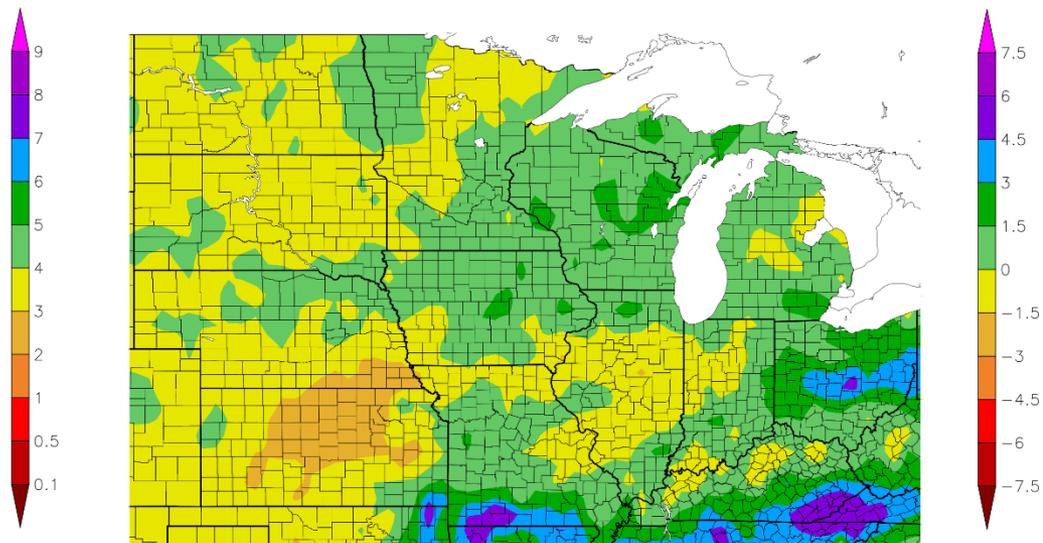
U.S. DEPARTMENT OF AGRICULTURE



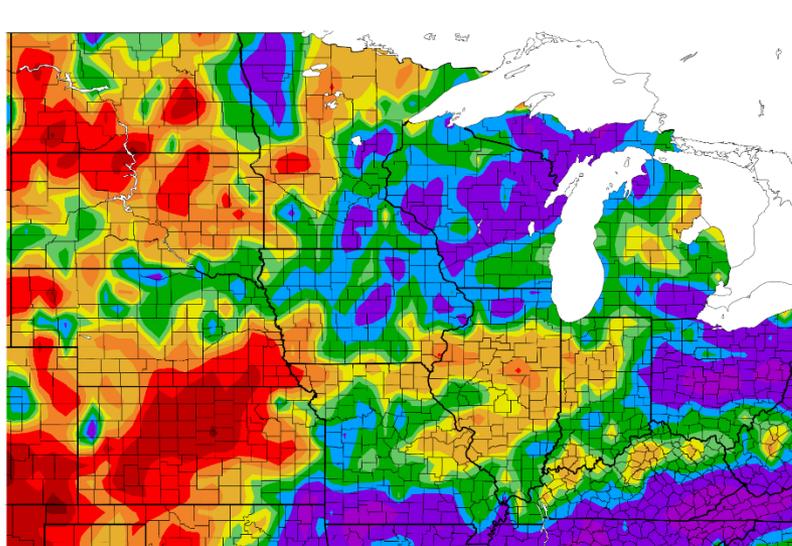
Precipitation (in)
3/13/2020 - 4/11/2020



Departure from Normal Precipitation (in)
3/15/2020 - 4/13/2020



Percent of Normal Precipitation (%)
3/15/2020 - 4/13/2020

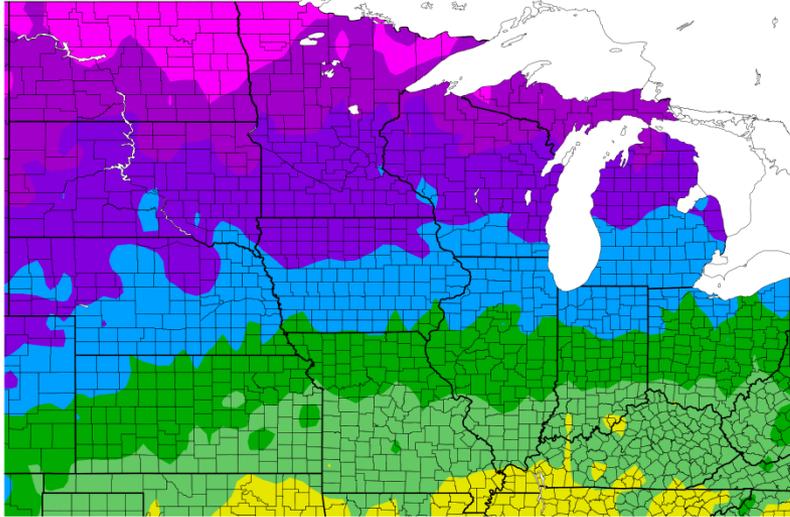


Generated 4/14/2020 at HPRCC using provisional data.

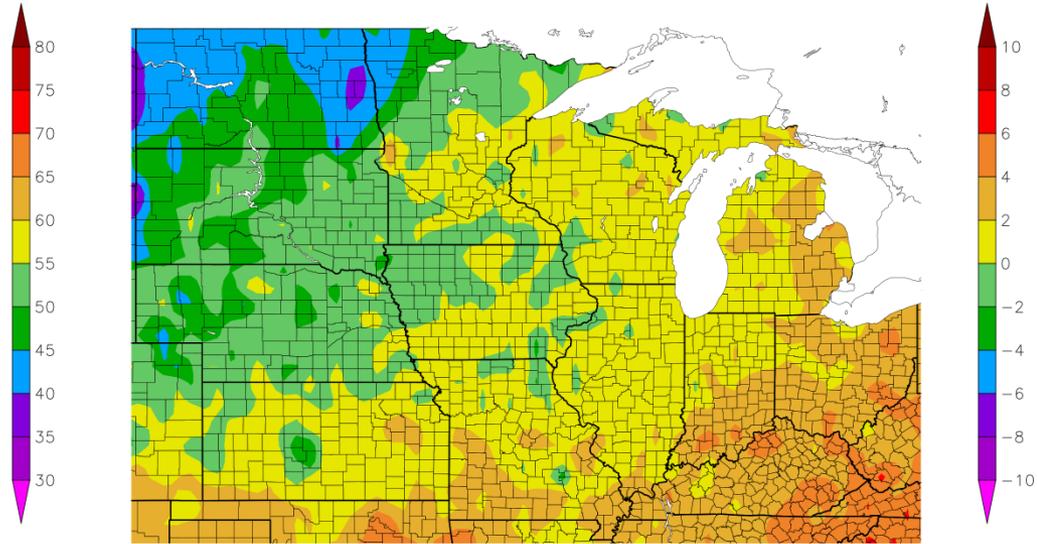
NOAA Regional Climate Centers

- Generally wetter east and drier west
- Bigger deficits in KS and Dakotas
- Lesser into IL/IN
- Dakotas mostly positive helping dry out.
- KS maybe not as positive into NE/IA

Temperature (F)
3/15/2020 – 4/13/2020



Departure from Normal Temperature (F)
3/15/2020 – 4/13/2020



Generated 4/14/2020 at HPRCC using provisional data.

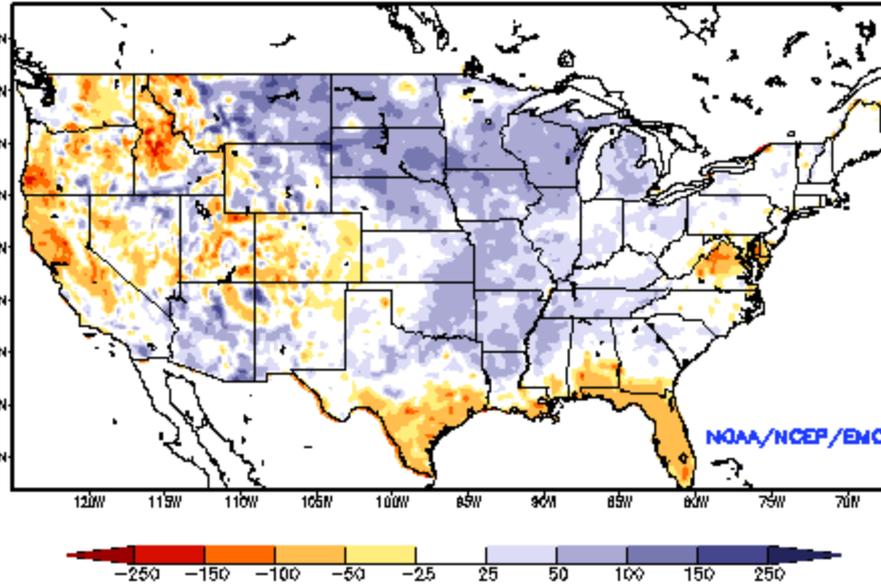
NOAA Regional Climate Centers Generated 4/14/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Still mostly warmer than average last 30 days across region.
- Plains holding a little cooler than avg. – especially north.
- Does not include any of current cold spell—updated now showing more impact of recent cold.

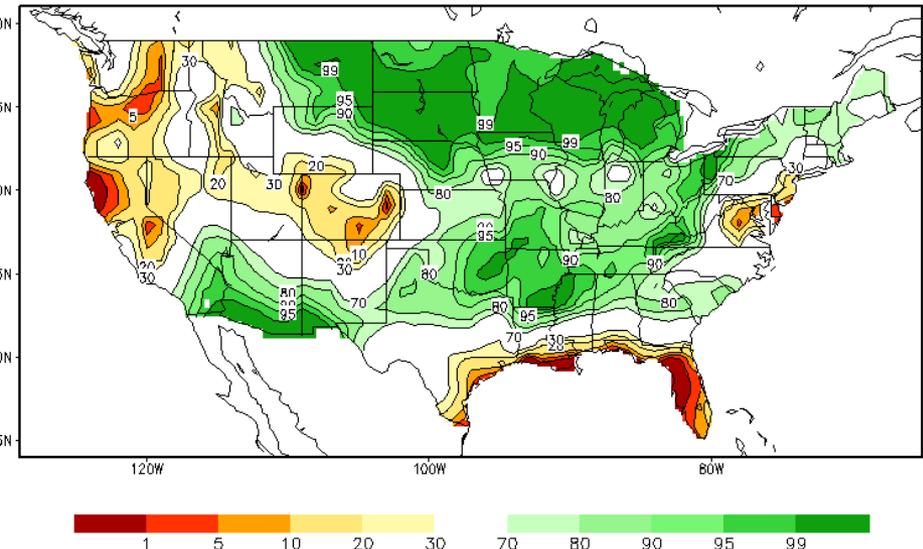
Soil Moisture

Ensemble-Mean - Current Total Column Soil Moisture Anomaly (mm)
NCEP NLDAS Products Valid: MAR 31, 2020



- Still mostly wetter than avg. soils.
- Some drying noted from KS-IA-IL likely mostly surface drying.
- Note difference in date. CPC model is 12 days newer than NLDAS.

Calculated Soil Moisture Ranking Percentile
APR 12, 2020

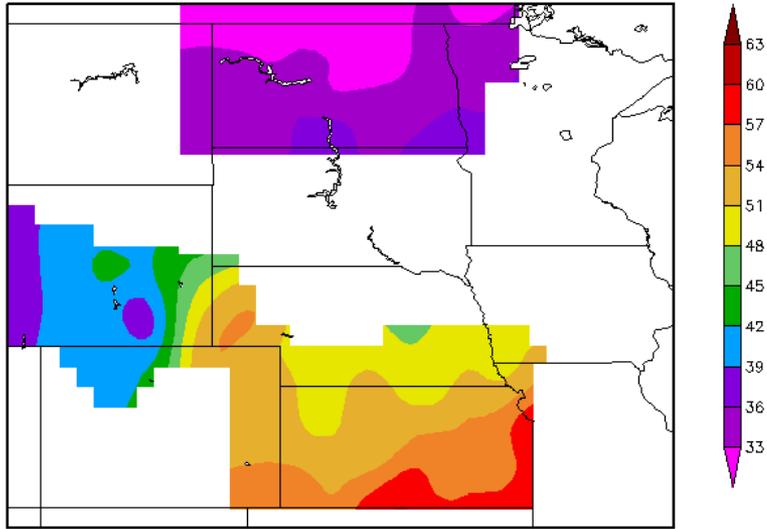


<http://www.emc.ncep.noaa.gov/mmb/nldas/drought/>

http://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml#

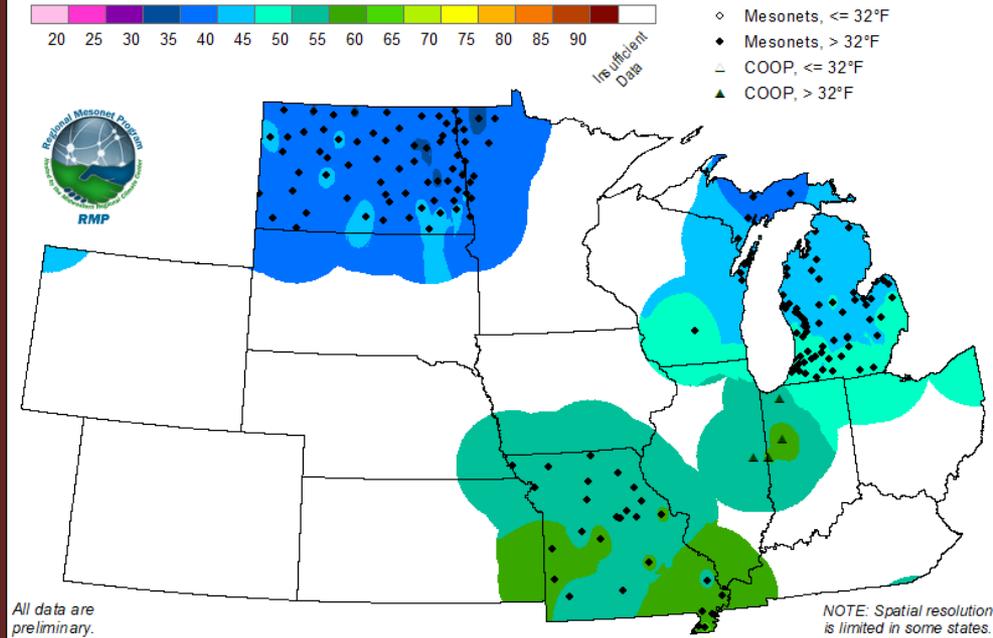
Soil Temperature

Soil Temperature (F at 4 inches)
4/12/2020 – 4/12/2020



High Plains Regional Climate Center
Generated 4/13/2020 using AWDN data.

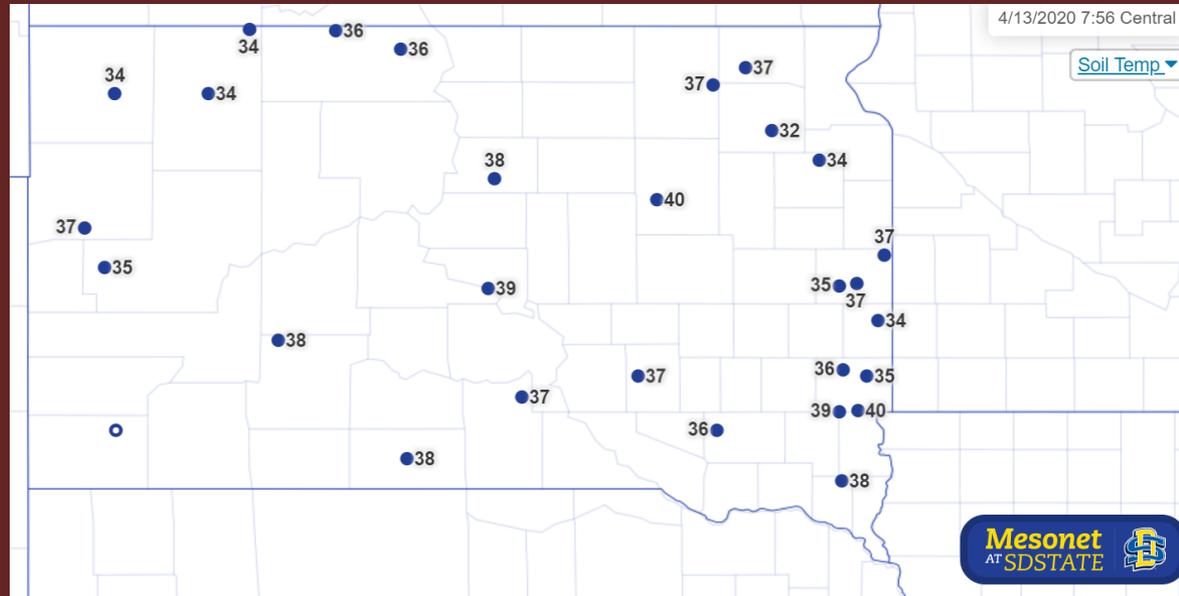
4" Soil Temperature (°F) (Bare) 24-Hour Period Through 4/11/2020



All data are preliminary.

NOTE: Spatial resolution is limited in some states.

- Soil temperatures not in too bad of shape – all frost out.
- Corn could be planted south.
- This was before current cold spell.



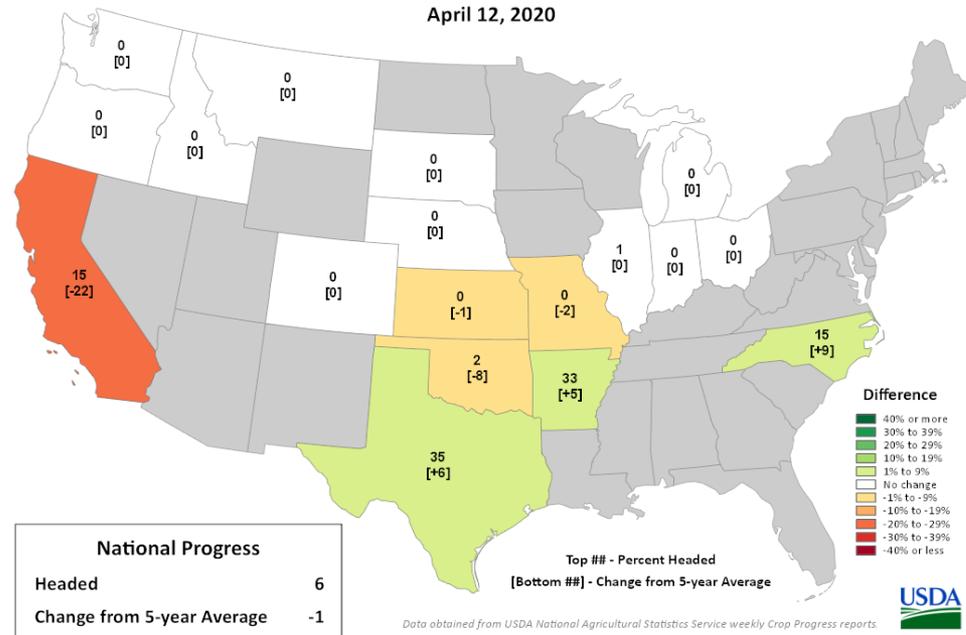
<https://mrcc.illinois.edu/RMP/currentMaps.html>
<https://hprcc.unl.edu/maps.php?map=AWDNMaps>
<http://climate.sdstate.edu>

Winter Wheat Progress

Percent Headed

April 12, 2020

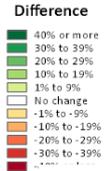
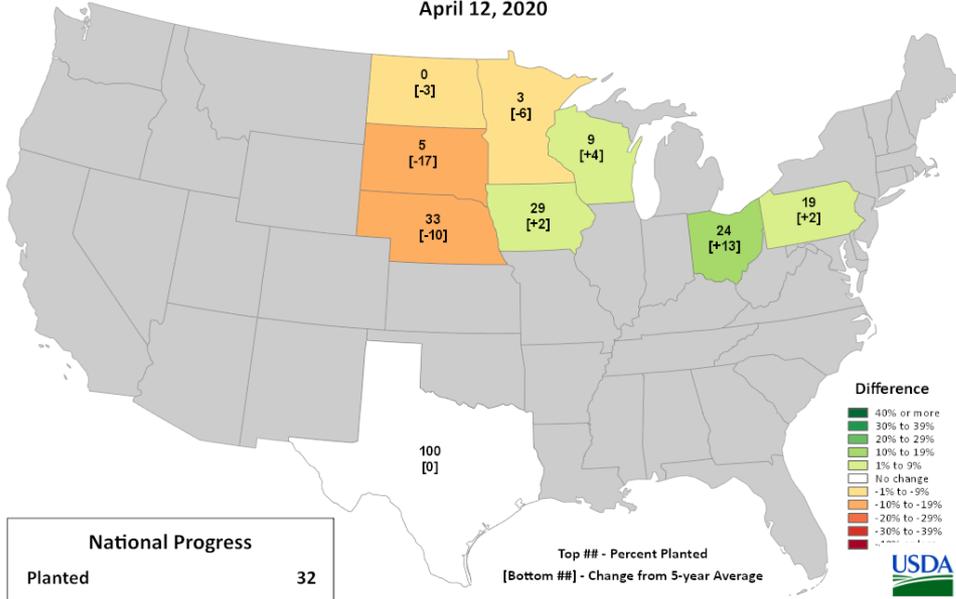
This product was prepared by the USDA Office of the Chief Economist (OCE) World Agricultural Outlook Board (WAOB)



Oats Progress

Percent Planted

April 12, 2020



National Progress	
Planted	32
Change from 5-year Average	-4

Top ## - Percent Planted
[Bottom ##] - Change from 5-year Average

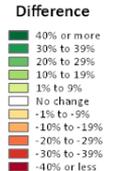
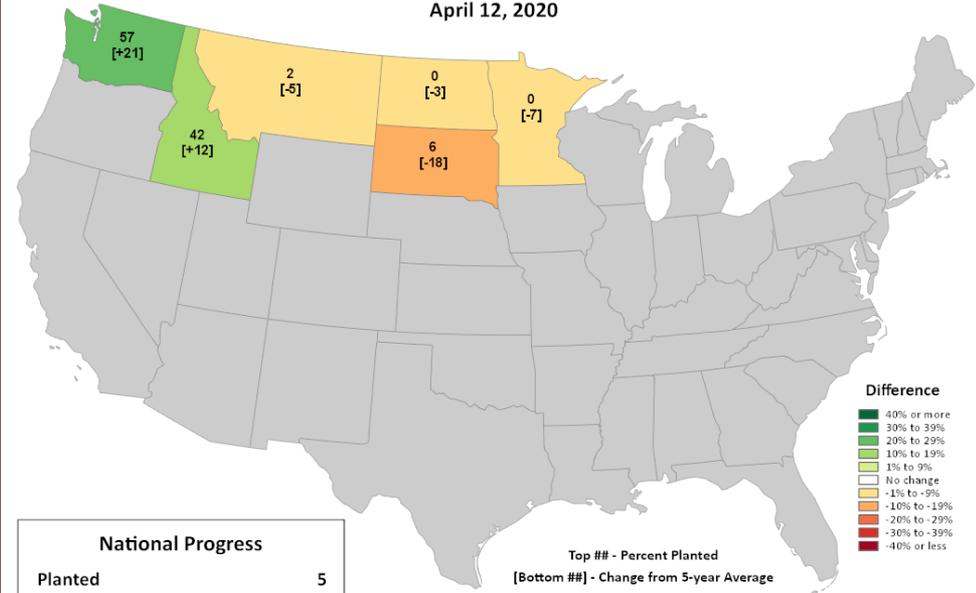
Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports

USDA NASS Crop Progress Small grains

Spring Wheat Progress

Percent Planted

April 12, 2020



National Progress	
Planted	5
Change from 5-year Average	-4

Top ## - Percent Planted
[Bottom ##] - Change from 5-year Average

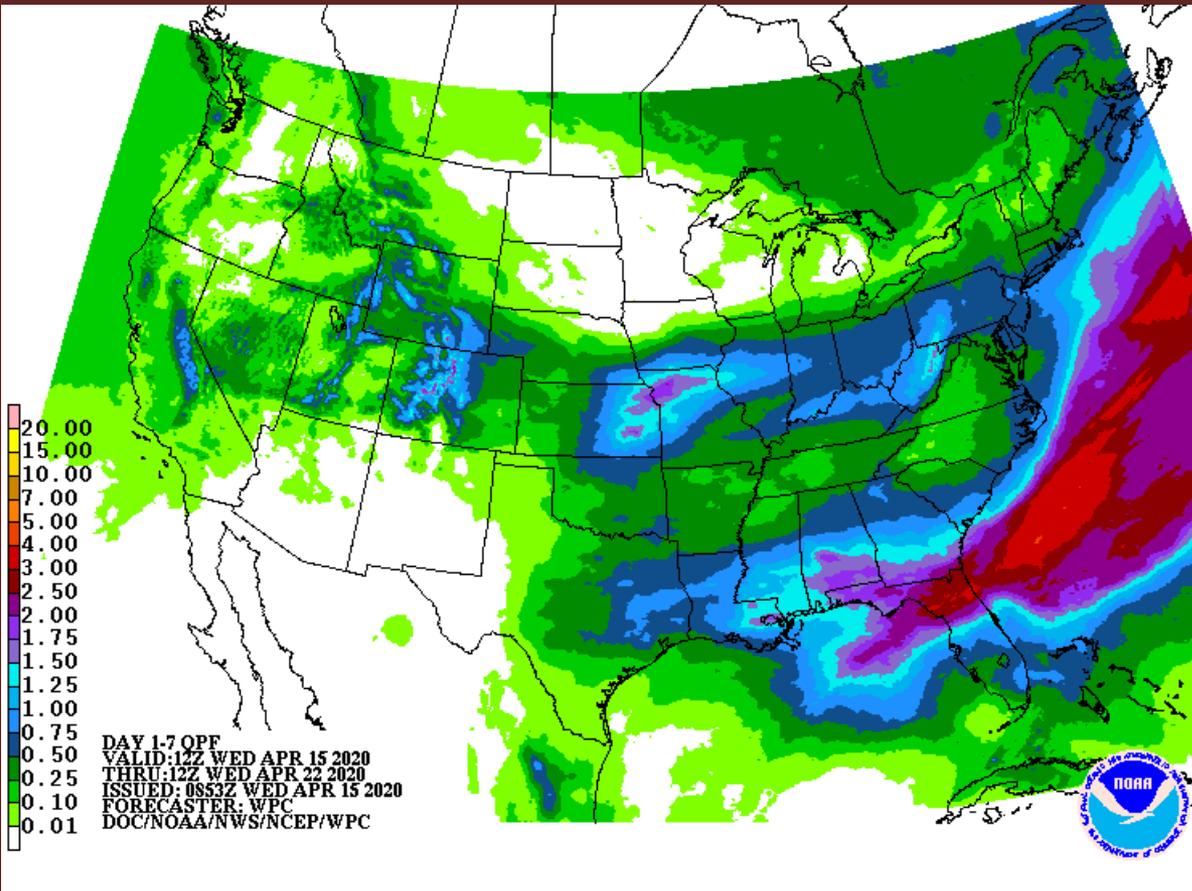
Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports

- Small grains planting moving ahead, but behind most states.
- Corn not shown – very limited planting.

Assorted AG Issues

- Cold temperatures serious problems for fruit trees and new plantings – more south than north.
- Cold also likely impacting winter wheat – waiting to hear issues.
- Could also knock back alfalfa and some grasses
- Cold cooling soils – delaying planting and drying soils.
- Planting progress likely to pick up into next week.
- Long term doesn't look too bad at this point – pending new outlooks.
- Flood issues less severe.

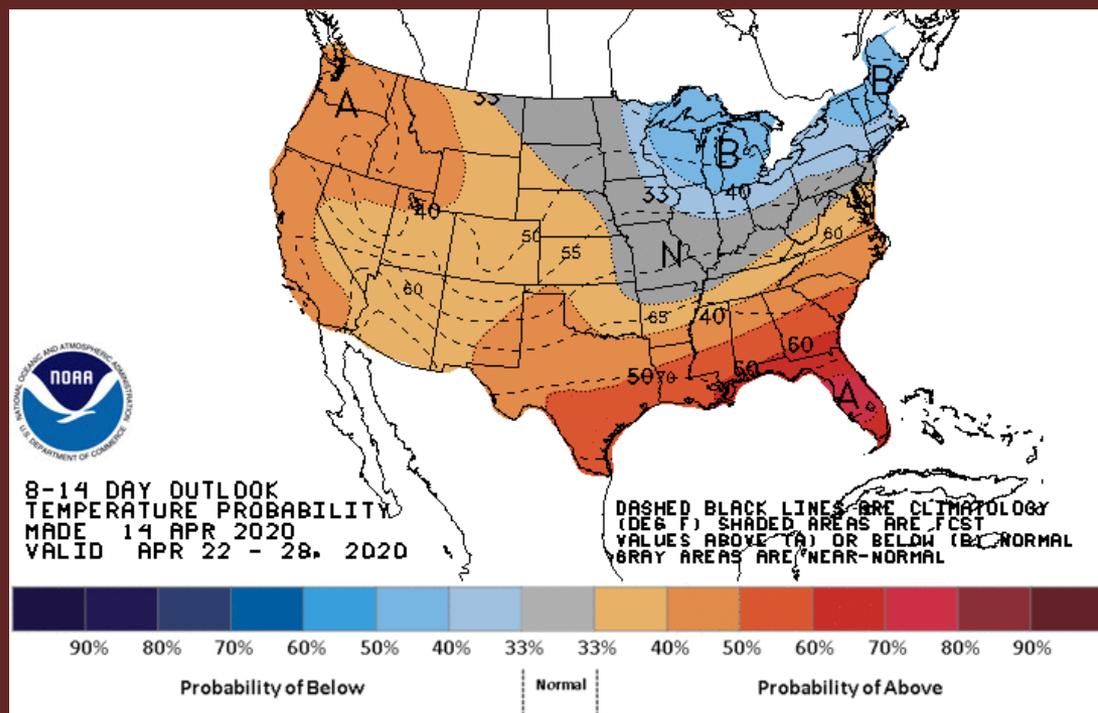
1-7 Day Precip



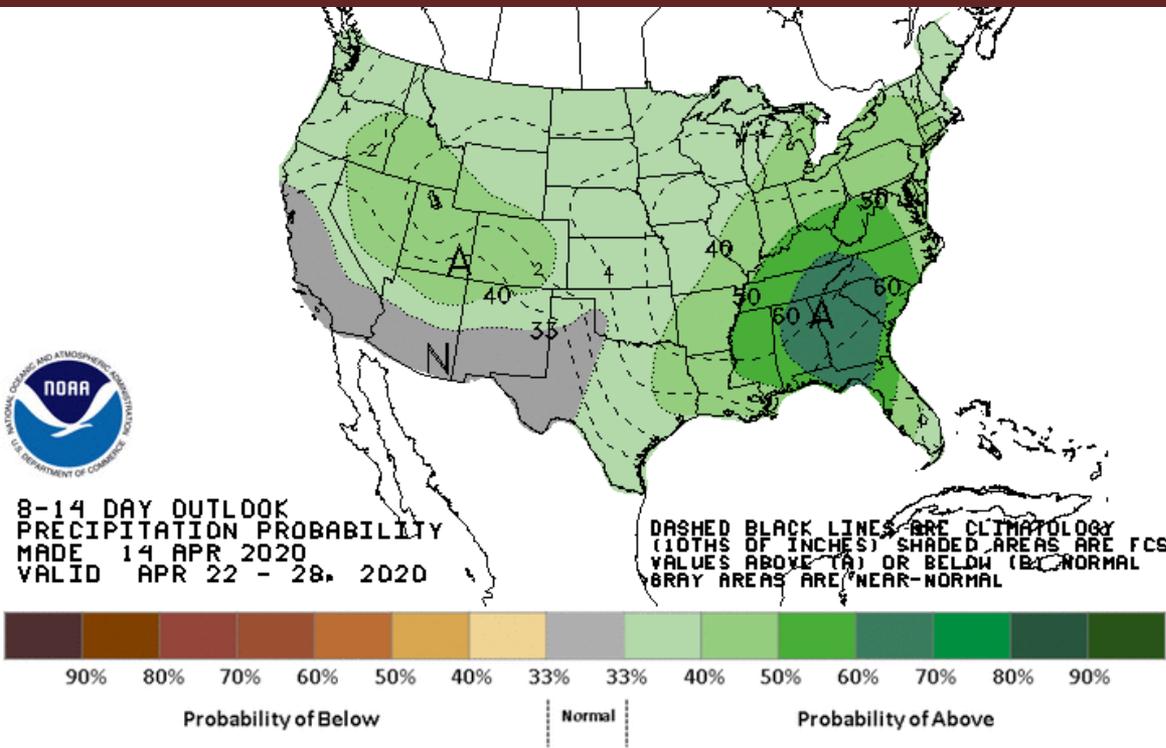
- Dry likely northern plains- Great Lakes
- Mostly light pcp Great Lakes.
- A little heavier (over an inch possible) KS eastward. Will fall as combination of rain/snow.

Temperature Outlook

- Still more likely colder than average eastern Corn Belt into end of April.
- Warming more into plains.
- Still possible to have some freezing temperatures in places. (Freezing temps more limited to Great Lakes area).



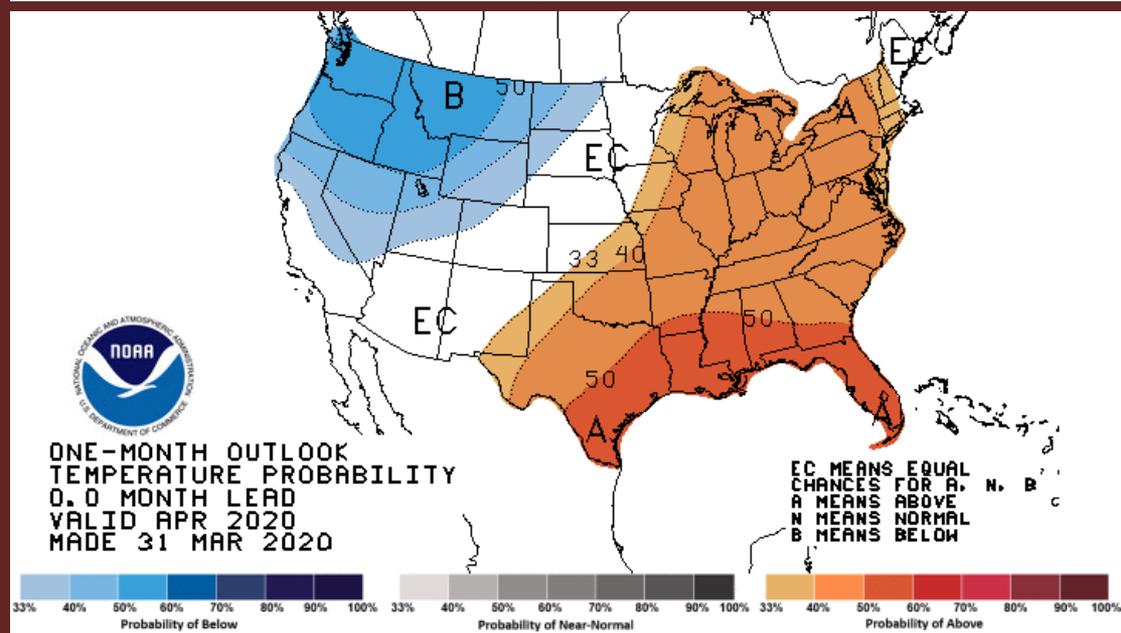
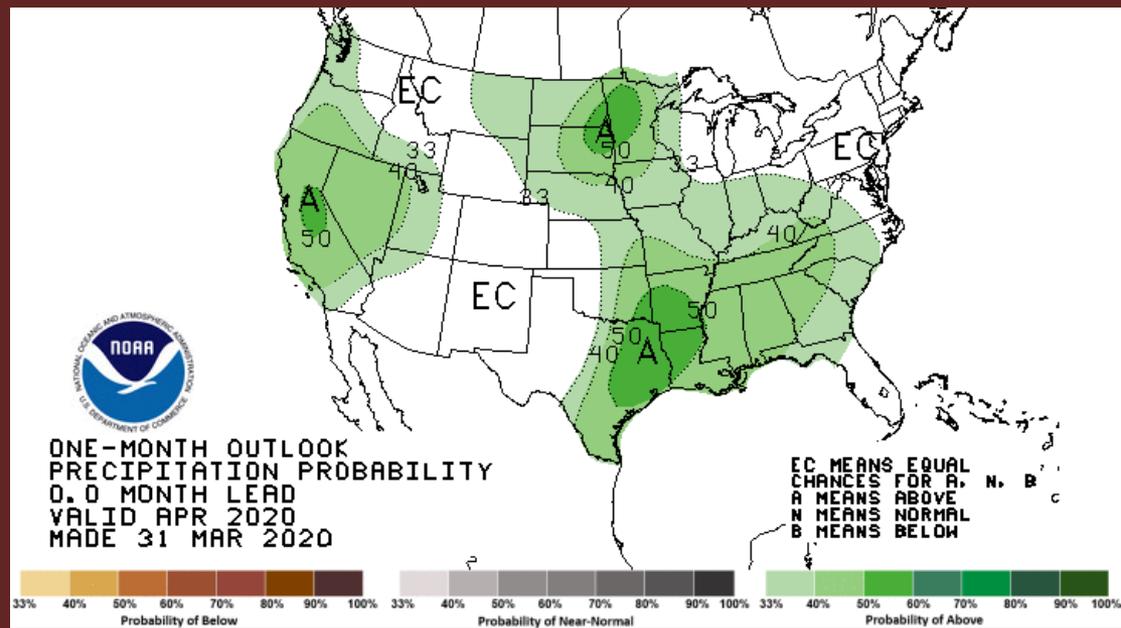
Precipitation Outlook



- Fairly weak precip chances – all wetter.
- Better chances of wet – east.
- Still may not be so bad for planting progress.
- Wetter may not be too bad if not excessively wet.

1-Month Outlook

- No update from last time.
- Not sure if temperature can verify or not.
- Precip still could.
- New ones released Thursday.



Drought in the Midwest

U.S. Drought Monitor

USDA Midwest Climate Hub

April 7, 2020

(Released Thursday, Apr. 9, 2020)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week 03-31-2020	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 01-07-2020	99.71	0.29	0.00	0.00	0.00	0.00
Start of Calendar Year 12-31-2019	99.71	0.29	0.00	0.00	0.00	0.00
Start of Water Year 10-01-2019	80.58	19.42	4.98	0.39	0.00	0.00
One Year Ago 04-09-2019	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

David Simeral
Western Regional Climate Center



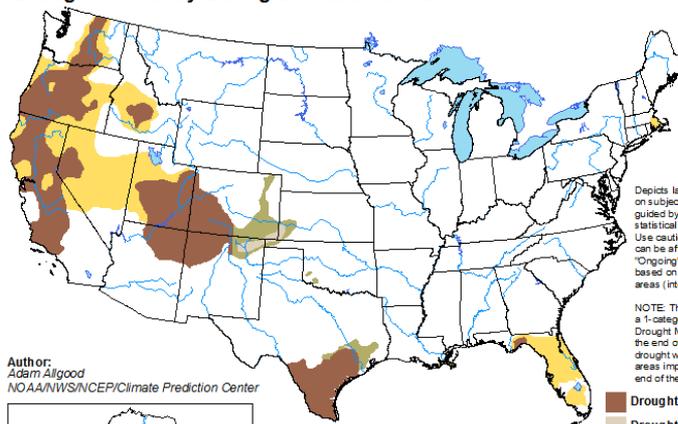
droughtmonitor.unl.edu



On this week's map, the region remained drought free. For the week, some wintery weather impacted part of Minnesota with snowfall accumulations ranging from 6-to-16 inches in areas of northwestern Minnesota, increasing the likelihood of major springtime flooding in the Red River Valley. According to the NWS NOHRSC, 20.6% (as compared to 58.9% last month) of the Northern Great Lakes Region is covered by snow while the Upper Midwest region is 3.2% covered by snow (compared to 33.7%) last month. According to NCEI, the Ohio Valley Climate Region had its 15th wettest (13th warmest) March on record while the Upper Midwest Climate Region experienced its 23rd wettest (15th warmest).

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

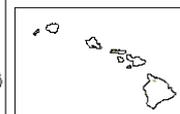
Valid for March 19 - June 30, 2020
Released March 19



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Adam Algood
NOAA/NWS/NCEP/Climate Prediction Center



- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/3eZ73>

<http://droughtmonitor.unl.edu/>

<http://www.cpc.ncep.noaa.gov/>

Summary

- Cold currently slowing planting progress and leading to potential specialty crop damage.
- Soils still wet though seeing decent drying this spring.
- Cold rest of this week and still some chances into early next week. Warm-up begins.
- Wetness outlook not too bad.
- Hints about new summer outlooks

Regional needs

- PET/refET – regional estimates?
- NWS has a digital interface with refET weekly estimates (forecast)
- Can we marry these two somehow?/Need some climatologies.

Next MAC-T Monthly Call

Next Call
May 6th, 2020